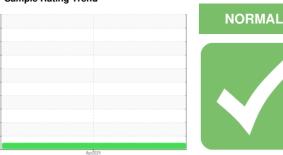


# **OIL ANALYSIS REPORT**

## Sample Rating Trend



Machine Id
4548-2
Component
2 Gearbox

## **CASTROL OPTIGEAR SYNTHETIC RO 150 (--- GAL)**

	DIAGNOSIS	
--	-----------	--

## Recommendation

Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry update for oil type.

#### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

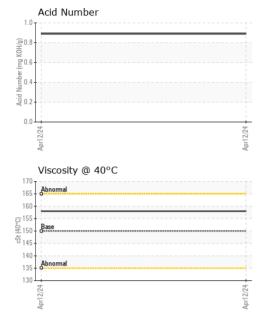
### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0920074		
Sample Date		Client Info		12 Apr 2024		
Machine Age	mls	Client Info		61075		
Oil Age	mls	Client Info		11075		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	10		
Chromium	ppm	ASTM D5185m	>10	<1		
Nickel	ppm	ASTM D5185m	>10	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	7		
Lead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>200	6		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0		
Barium	ppm	ASTM D5185m		6		
Molybdenum	ppm	ASTM D5185m		812		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		<1		
Calcium	ppm	ASTM D5185m		219		
Phosphorus	ppm	ASTM D5185m		228		
Zinc	ppm	ASTM D5185m		15		
Sulfur	ppm	ASTM D5185m		15165		
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	14		
Sodium	ppm	ASTM D5185m		4		
Potassium	ppm	ASTM D5185m	>20	2		
FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.89		



# **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	150	158		
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
ODABUO						
GRAPHS						
Iron (ppm)			20	Lead (ppm)		
Iron (ppm)			20	Severe		
Iron (ppm)			20 E 10	Severe		
Iron (ppm)  Severe Abnormal			튭 10	Severe  Abnormal		4-
Iron (ppm)  Severe Abnormal			튭 10	Severe  Abnormal		Apr12/24
Iron (ppm)  Severe  200 + Abnormal  400 - 477,1104			튭 10	April 224	pm)	Apri 224
Iron (ppm)  Severe Abnomal  Aluminum (ppm)			튭 10	Abnomal	pm)	Apri224
Iron (ppm)  Severe  Abnormal  Aluminum (ppm)			Apri 2/24	Abnormal  Chromium (p	pm)	Apr12/24
Iron (ppm)  Severe  Abnomal  Aluminum (ppm)  Severe  Abnomal			Apr12/24	Abnormal  Chromium (p	pm)	Apr12/24
Iron (ppm)  Severe  Abnomal  Aluminum (ppm)  Severe  Abnomal  Aluminum (ppm)			Apri 2.24	Abnormal  Chromium (p	pm)	
Iron (ppm) Severe Abnormal Aluminum (ppm) Severe Abnormal Abnormal			Apr12/24	Abnormal  Chromium (p	pm)	Apr1224 Apr1224
Iron (ppm)  Severe  Abnormal  Aluminum (ppm)  Severe  Abnormal  Copper (ppm)			Apri 2.24	Abnormal  Chromium (p  Severe  Abnormal  Abnormal  Silicon (ppm)	pm)	
Iron (ppm)  Severe  Abnomal  Aluminum (ppm)  Severe  Abnomal  Copper (ppm)			April 2/24 April 2/24 Ppm	Abnormal  Chromium (p  Severe  Abnormal  Silicon (ppm)	pm)	
Iron (ppm)  Severe  Abnormal  Aluminum (ppm)  Severe  Abnormal  Copper (ppm)  Severe  Abnormal  Abnormal			April 2/24 April 2/24 April 2/24 April 2/24 April 2/24 April 2/2 Oct. 12 Oct.	Abnormal  Chromium (p  Severe  Abnormal  Silicon (ppm)	pm)	
Iron (ppm)  Severe  Abnomal  Aluminum (ppm)  Severe  Abnomal  Copper (ppm)  Severe  Abnomal			Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24	Chromium (p  Severe  Abnormal  Abnormal  Silicon (ppm)  Severe  Abnormal	pm)	Apr12/24
Iron (ppm)  Severe  Abnormal  Aluminum (ppm)  Severe  Abnormal  Copper (ppm)  Severe  Abnormal  Abnormal			April 2/24 April 2/24 April 2/24 April 2/24 April 2/24 April 2/2 Oct. 12 Oct.	Abnormal  Chromium (p  Severe  Abnormal  Silicon (ppm)	pm)	
Iron (ppm)  Severe Abnomal  Aluminum (ppm)  Severe Abnomal  Copper (ppm)  Abnomal  Viscosity @ 40°C			April 2/24 April 2/24 April 2/24 Ppm	Abnormal  Severe  Abnormal  Abnormal  Silicon (ppm)  Abnormal	pm)	Apr12/24
Iron (ppm)  Severe Abnormal  Aluminum (ppm)  Severe Abnormal  Copper (ppm)  Severe Abnormal  Viscosity @ 40°C			April 2/24 April 2/24 April 2/24 Ppm	Abnormal  Severe  Abnormal  Abnormal  Silicon (ppm)  Abnormal	pm)	Apr12/24
Iron (ppm)  Severe Abnormal  Aluminum (ppm)  Severe Abnormal  Copper (ppm)  Severe Abnormal  Viscosity @ 40°C			April 2/24 April 2/24 April 2/24 Ppm	Abnormal  Severe  Abnormal  Abnormal  Silicon (ppm)  Abnormal	pm)	Apr12/24
Iron (ppm)  Severe Ahnomal  Aluminum (ppm)  Severe Abnomal  Copper (ppm)  Severe Abnomal  Viscosity @ 40°C  Abnomal  Abnomal  Abnomal  Abnomal  Abnomal  Abnomal			Apri 2/24	Severe  Abnormal  Chromium (p Severe  Abnormal  Silicon (ppm) Severe  Abnormal  Acid Number	pm)	Apr12/24
Iron (ppm)  Severe Ahnomal  Aluminum (ppm)  Severe Abnomal  Copper (ppm)  Severe Abnomal  Viscosity @ 40°C  Ahnomal  Ahnomal  Ahnomal			Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24 Apri 2.24	Abnormal  Severe  Abnormal  Abnormal  Silicon (ppm)  Abnormal	pm)	Apr1224





Certificate 12367

Laboratory

**Sample No.** : WC0920074 Lab Number : 06178963

Test Package : MOB 2

Unique Number : 11030289

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

: 14 May 2024 Tested : 05 Jun 2024

: 05 Jun 2024 - Doug Bogart Diagnosed

1148 NEWARK TURNPIKE KEARNY, NJ US 07032

**ALSTOM C/O NEW JERSEY TRANSIT** 

Contact: DAVE GILBERT david.gilbert@alstomgroup.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (973)277-0826

Contact/Location: DAVE GILBERT - NEWKEA